

ABSTRACT OF THE DISCLOSURE

In a method for continuous measuring of dynamic fluid consumption, particularly fuel, the pressure beyond the flow sensor is adjusted to a constant value by means of a pressure regulator by using a continuously-operating flow sensor with variable pressure drop, preferably a mass flow sensor. Fluid is guided into the pressure regulator after exceeding a discretionary pressure to allow continuous, accurate, as well timely and highly discriminating consumption measuring with regulated exit pressure for the fluid even at a back-flow of short duration or during temperature-related expansion of the fluid. A pressure regulator (9) provided for this purpose has a housing (41, 42), which contains an element (40) biased by a changeable force whereby the element (40) is coupled to a valve arrangement (49, 50) that is also arranged in the housing (41, 42) for the fluid to build up pressure therein. The pressure regulator (9) contains a catch volume for the fluid.